



IFIV

PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICANT: STIEGLBAUER, W ET AL 4-PCT  
SERIAL NO.: 10/563,528  
FILED: JANUARY 3, 2006  
TITLE: SPOT WELDING TONGS FOR ROBOTIC APPLICATIONS  
IN RESISTANCE WELDING OR WORKPIECES

SUBMISSION OF INTERNATIONAL PRELIMINARY EXAMINATION REPORT

**MAIL STOP AMENDMENTS**

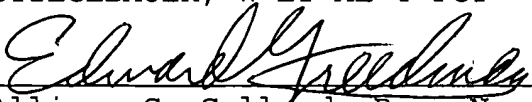
Commissioner of Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Dear Sir:

Attached hereto is a copy of the International Preliminary Examination Report.

It is respectfully requested that this document be placed into the application file.

Respectfully submitted,  
STIEGLBAUER, W ET AL 4-PCT

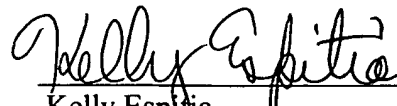
  
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ERF:rd

Enclosures: Copy of International Preliminary Examination Report

I hereby certify that this correspondence is being deposited with the U.S. Postal Service as first class mail in an envelope addressed to: Commissioner of Patents, P.O. Box 1450, Alexandria, VA 22313-1450, on June 8, 2006.

  
Kelly Espitia

From the INTERNATIONAL BUREAU

**PCT**

NOTIFICATION OF TRANSMITTAL  
OF COPIES OF TRANSLATION  
OF THE INTERNATIONAL PRELIMINARY REPORT  
ON PATENTABILITY  
(CHAPTER I OR CHAPTER II  
OF THE PATENT COOPERATION TREATY)  
(PCT Rules 44bis.3(c) and 72.2)

To:

SONN & PARTNER  
Riemergasse 14  
A-1010 Wien  
AUTRICHE

26. Mai 2006

Date of mailing (day/month/year) 18 May 2006 (18.05.2006)	
Applicant's or agent's file reference R 43453	IMPORTANT NOTIFICATION
International application No. PCT/AT2004/000151	International filing date (day/month/year) 04 May 2004 (04.05.2004)
Applicant FRONIUS INTERNATIONAL GMBH et al	

## 1. Transmittal of the translation to the applicant.

☐

The International Bureau transmits herewith a copy of the English translation of the international preliminary report on patentability (Chapter I).

☒

The International Bureau transmits herewith a copy of the English translation of the international preliminary report on patentability (Chapter II).

## 2. Transmittal of the copy of the translation to the designated or elected Offices.

The International Bureau notifies the applicant that copies of that translation have been transmitted to the following designated or elected Offices requiring such translation:

KR

The following designated or elected Offices, having waived the requirement for such a transmittal at this time, will receive copies of that translation from the International Bureau only upon their request:

AE, AG, AL, AM, AP, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EA, EC, EE, EG, EP, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OA, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW

## 3. Reminder regarding translation into (one of) the official language(s) of the elected Office(s).

The applicant is reminded that, where a translation of the international application must be furnished to an elected Office, that translation must contain a translation of any annexes to the international preliminary report on patentability (Chapter II).

It is the applicant's responsibility to prepare and furnish such translation directly to each elected Office concerned within the applicable time limit (Rule 74.1). See Volume II of the PCT Applicant's Guide for further details.

The International Bureau of WIPO 34, chemin des Colombettes 1211 Geneva 20, Switzerland	Authorized officer  Yolaine Cussac
Facsimile No.+41 22 740 14 35	Facsimile No.+41 22 338 70 80

**Translation**

**PATENT COOPERATION TREATY**

**PCT**

**INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY**

(Chapter II of the Patent Cooperation Treaty)

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference <b>R 43453</b>	<b>FOR FURTHER ACTION</b> See Form PCT/IPEA/416	
International application No. <b>PCT/AT2004/000151</b>	International filing date (day/month/year) <b>04.05.2004</b>	Priority date (day/month/year) <b>03.07.2003</b>
International Patent Classification (IPC) or national classification and IPC <b>B23K11/30</b>		
Applicant <b>FRONIUS INTERNATIONAL GMBH</b>		

1. This report is the international preliminary examination report, established by this International Preliminary Examining Authority under Article 35 and transmitted to the applicant according to Article 36.

2. This REPORT consists of a total of 8 sheets, including this cover sheet.

3. This report is also accompanied by ANNEXES, comprising:

a. ☐ (sent to the applicant and to the International Bureau) a total of \_\_\_\_\_ sheets, as follows:

☐ sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications authorized by this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions).

☐ sheets which supersede earlier sheets, but which this Authority considers contain an amendment that goes beyond the disclosure in the international application as filed, as indicated in item 4 of Box No. I and the Supplemental Box.

b. ☐ (sent to the International Bureau only) a total of (indicate type and number of electronic carrier(s)) \_\_\_\_\_, containing a sequence listing and/or tables related thereto, in computer readable form only, as indicated in the Supplemental Box Relating to Sequence Listing (see Section 802 of the Administrative Instructions).

4. This report contains indications relating to the following items:

<input checked="" type="checkbox"/>	Box No. I	Basis of the report
<input type="checkbox"/>	Box No. II	Priority
<input type="checkbox"/>	Box No. III	Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
<input checked="" type="checkbox"/>	Box No. IV	Lack of unity of invention
<input checked="" type="checkbox"/>	Box No. V	Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability: citations and explanations supporting such statement
<input type="checkbox"/>	Box No. VI	Certain documents cited
<input type="checkbox"/>	Box No. VII	Certain defects in the international application
<input checked="" type="checkbox"/>	Box No. VIII	Certain observations on the international application

Date of submission of the demand	Date of completion of this report
Name and mailing address of the IPEA/EP	Authorized officer
Facsimile No.	Telephone No.

## INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.

PCT/AT2004/000151

Box No. 1

Basis of the report

1. With regard to the language, this report is based on the international application in the language in which it was filed, unless otherwise indicated under this item.
- ☐ This report is based on translations from the original language into the following language \_\_\_\_\_ which is the language of a translation furnished for the purposes of:
- ☐ international search (Rule 12.3 and 23.1(b))
- ☐ publication of the international application (Rule 12.4)
- ☐ international preliminary examination (Rule 55.2 and/or 55.3)
2. With regard to the elements of the international application, this report is based on *(replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report)*:
- ☐ the international application as originally filed/furnished
- ☒ the description:
- pages 1-13 \_\_\_\_\_ as originally filed/furnished
- pages\* \_\_\_\_\_ received by this Authority on \_\_\_\_\_
- pages\* \_\_\_\_\_ received by this Authority on \_\_\_\_\_
- ☒ the claims:
- nos. 1-18 \_\_\_\_\_ as originally filed/furnished
- nos.\* \_\_\_\_\_ as amended (together with any statement) under Article 19
- nos.\* \_\_\_\_\_ received by this Authority on \_\_\_\_\_
- nos.\* \_\_\_\_\_ received by this Authority on \_\_\_\_\_
- ☒ the drawings:
- sheets 1/7-7/7 \_\_\_\_\_ as originally filed/furnished
- sheets\* \_\_\_\_\_ received by this Authority on \_\_\_\_\_
- sheets\* \_\_\_\_\_ received by this Authority on \_\_\_\_\_
- ☐ a sequence listing and/or any related table(s) – see Supplemental Box Relating to Sequence Listing.
3. ☐ The amendments have resulted in the cancellation of:
- ☐ the description, pages \_\_\_\_\_
- ☐ the claims, nos. \_\_\_\_\_
- ☐ the drawings, sheets/figs \_\_\_\_\_
- ☐ the sequence listing (*specify*): \_\_\_\_\_
- ☐ any table(s) related to sequence listing (*specify*): \_\_\_\_\_
4. ☐ This report has been established as if (some of) the amendments annexed to this report and listed below had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).
- ☐ the description, pages \_\_\_\_\_
- ☐ the claims, nos. \_\_\_\_\_
- ☐ the drawings, sheets/figs \_\_\_\_\_
- ☐ the sequence listing (*specify*): \_\_\_\_\_
- ☐ any table(s) related to sequence listing (*specify*): \_\_\_\_\_

\* If item 4 applies, some or all of those sheets may be marked "superseded."

## INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.

PCT/AT2004/000151

Box No. IV

Lack of unity of invention

1. ☒ In response to the invitation to restrict or pay additional fees the applicant has:
- ☐ restricted the claims.
  - ☒ paid additional fees.
  - ☐ paid additional fees under protest.
  - ☐ neither restricted the claims nor paid additional fees.
2. ☐ This Authority found that the requirement of unity of invention is not complied with and chose, according to Rule 68.1, not to invite the applicant to restrict or pay additional fees.
3. This Authority considers that the requirement of unity of invention in accordance with Rules 13.1, 13.2 and 13.3 is:
- ☐ complied with.
  - ☐ not complied with for the following reasons:

1. The different groups of supposed inventions are claims 1-10 and 11-18.

**Lack of unity of invention - a priori**

The special technical feature of independent claim 1 is indicated as "that the pay-out roller (10) and the wind-in roller (11) of the winding device (7) are arranged on the base body (2) or on the tongs arm (3), and that at least one guide groove (8) is arranged on the tongs arm (3) and/or on the electrode holder for guiding the strip (6) along the tongs arm (3)."

The special technical feature of independent claim 11 is indicated as "that the tongs arm (3) is formed by a main element (24) which is pre-tensed by at least a tie bar or pull rope (25)."

The two groups of supposed inventions do not address the same technical problem and do not share any same or corresponding technical features.

4. Consequently, this report has been established in respect of the following parts of the international application:

- ☒ all parts.
- ☐ the parts relating to claims Nos. \_\_\_\_\_

## INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.

PCT/AT2004/000151

Box No. V

Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability:  
citations and explanations supporting such statement

## 1. Statement

Novelty (N)	Claims	<u>1-10, 12-18</u>	YES
	Claims	<u>11</u>	NO
Inventive step (IS)	Claims	<u></u>	YES
	Claims	<u>1-10, 12-18</u>	NO
Industrial applicability (IA)	Claims	<u>1-18</u>	YES
	Claims	<u></u>	NO

## 2. Citations and explanations (Rule 70.7)

2. The present application does not meet the requirements of PCT Article 33(1) because the subject matter of claim 1 does not involve an inventive step (PCT Article 33(3)).

a) Document DE-A-44 16 504 is considered the prior art closest to the subject matter of claim 1. It discloses (the references in parentheses relate to said document):

Spot welding tongs (1) suitable for use by robots for resistance welding of workpieces, in particular metal sheets, with tongs arms (2) that are pivotably mounted on a base body and which can be adjusted via an actuation means and on which electrode holders for the electrodes (4) are arranged, and with a winding device (7) comprising a pay-out roller (9a) and a wind-in roller (9b) for winding in or out the strip (5) for protecting at least one electrode (4), wherein the pay-out roller (9a) and the wind-in roller (9b) of the winding device are arranged on the base body (2) or on the tongs

## INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.

PCT/AT2004/000151

Box No. V

Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability:  
citations and explanations supporting such statement

arm (3) - see in particular figure 1; column 3, lines 48-50.

In addition, the winding device of document DE-A-197 54 546 is also covered by the wording "arranged on the base body or on the tongs arm".

b) The subject matter of claim 1 differs therefrom in that at least one guide groove (8) is arranged on the tongs arm (3) and or on the electrode holders (4) for guiding the strip (6) along the tongs arm (3).

c) It should be obvious to a person skilled in the art to provide a guide groove wherever it might be of use, especially since one (7) was already used in DE-A-44 16 504 on the electrode cap (4).

3. The applicant has argued that DE-A-44 16 504 gives no further details as to the arrangement of the winding device and the course of the electrode protection strip. This may well be so, but a look at figure 1 is sufficient to show that "the pay-out roller and the wind-in roller are arranged on the tongs arm", and therefore this feature belongs in the preamble.

4. The present application does not meet the requirements of PCT Article 33(1) because the subject matter of claim 11 is not novel (PCT

## INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.

PCT/AT2004/000151

Box No. V

Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability;  
citations and explanations supporting such statement

Article 33(2)).

US-A-2 678 367 is considered the prior art closest to the subject matter of claim 11. It discloses (the references in parentheses relate to said document):

Spot welding tongs suitable for use by robots for the resistance welding of workpieces, in particular metal sheets, with tongs arms (4, 5) that are pivotably mounted on a base body and which can be adjusted via an actuation means, and to which electrode holders for the electrodes (3) are secured, wherein the tongs arm (3) is formed by a main element (5) which is pretensed by at least a tie bar (7) or pull rope - see in particular figure 5.

5. The applicant has argued that the prior art tongs arms are integral and/or solid in design. The subject matter of claim 11 can be produced so as to be significantly smaller and lighter.

However, the wording of claim 11 "*the tongs arm (3) is formed by a main element (5) which is pretensed by at least a tie bar (7) or pull rope*" does not exclude the possibility that the tongs arm could be integral or solid in design.

6. Spot welding tongs likewise covered by the wording of claim 11 are disclosed in US-A-4 684 778 - see in particular figure 2, main element (70)



## INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.

PCT/AT2004/000151

Box No. V

Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability;  
citations and explanations supporting such statement

pretensed by tie bar (110).

7. Dependent claims 2-10 and 12-18 do not contain any features which, in combination with the features of any claim to which they refer, meet the PCT novelty and inventive step requirements.
- a) The additional features of claims 2 and 3 are known from DE-A-44 16 504 - see in particular claim 6 and column 3, line 40.
- b) The additional features of claims 4-10 and 12-18 appear to be entirely rudimentary and normal designs for tongs.
- c) The additional features of claim 13 are known from EP-A-0 391 551 - see in particular figure 2.